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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,183	07/31/2003	Gerald Keith Bartley	ROC920030078US1	9831
7590	09/19/2005		EXAMINER	
Robert R. Williams IBM Corporation Dept. 917 3605 Highway 52 North Rochester, MN 55901			TAT, BINH C	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,183

Applicant(s)

BARTLEY ET AL.

Examiner

Binh C. Tat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application 10/632183 filed on 07/31/03.

Claims 1-13 remain pending in the application.

Election/Restrictions

This application contains claim groups directed to the following patentably distinct species of the claimed invention:

Group	Invention
I.	Claims 1-8, and 11-14draw to method for creating customized mesh planes in electronic package.
II.	Claims 9-10, drawn to apparatus with customized mesh plane defined by a plurality of uniformly spaced apart horizontal and vertical mesh trace.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Joan Pennington on September 14, 2005 to request an oral election to the above restriction requirement, Miss Joan Pennington elected group I claims 1-8, and 11-14 without traverse and canceled claims 9-10.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Baras et al. (U.S. Patent 2004/0188138).

4. As to claims 1, and 11 Baras et al. teaches a method for creating customized mesh planes in electronic packages comprising the steps of: receiving electronic package physical design data (see fig 11 element 1102 and paragraph 0039); comparing signal traces (see element 1105, and 1104) in each adjacent plane to a mesh plane with a mesh layout of the mesh plane (see fig 9-11 and paragraph 0034-0040); identifying signal traces adjacent to mesh holes (see element 1102) in the mesh layout (see fig 9-11 element 1102 and paragraph 0034-0040); selecting a fill method to replace selected mesh holes with added mesh structure aligned with the identified signal traces (see fig 7, 9, 11 and element 1106 paragraph 0033-0036 and 0039-0040).

5. As to claims 2, and 12 Baras et al. teaches wherein the step of selecting said fill method includes the steps of providing a plurality of fill methods, said fill methods including selected ones of a crosshair fill method, a single line fill method, a signal mirror fill method, a mesh

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shifting fill method, a corner fill method, and a complete fill method; and selecting one or a combination of said fill methods (see fig 7, 9, 11 and element 1106 paragraph 0033-0036 and 0039-0040 and background).

6. As to claims 3, Baras et al. teaches wherein the step of selecting said fill method includes selecting a crosshair fill method to replace selected mesh holes with a crosshair mesh structure aligned with the identified signal traces (see fig 9-11 element 1102 and paragraph 0034-0040).

7. As to claims 4, Baras et al. teaches wherein the step of selecting said fill method includes selecting a single line fill method to replace selected mesh holes with a single line mesh structure aligned with the identified signal traces (see fig 9-11 element 1102 and paragraph 0034-0040).

8. As to claims 5, Baras et al. teaches wherein the step of selecting said fill method includes selecting a corner fill method to replace selected mesh holes with a corner fill mesh structure aligned with the identified signal traces (see fig 9-11 element 1102 and paragraph 0034-0040).

9. As to claims 6, Baras et al. teaches wherein the step of selecting said fill method includes selecting a complete fill method to replace selected mesh holes with a complete fill mesh structure aligned with the identified signal traces (see fig 7, 9, 11 and element 1106 paragraph 0033-0036 and 0039-0040 and background and summary)

10. As to claims 7, Baras et al. teaches wherein the step of selecting said fill method includes selecting a signal mirror fill method to replace selected mesh holes with a signal mirror mesh structure substantially aligned with all of the signal traces (see fig 7, 9, 11 and element 1106 paragraph 0033-0036 and 0039-0040 and background).

11. As to claims 8, Baras et al. teaches wherein the step of selecting said fill method includes selecting a crosshair fill method to replace selected mesh holes with a crosshair mesh structure

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aligned with the identified signal traces', and a single line fill method to replace other selected mesh holes with a single line mesh structure aligned with the identified signal traces (see fig 11 element 1102 and paragraph 0039).

12. As to claims 13, Baras et al. teaches wherein the step of selecting said fill method includes the steps of selecting one or a combination of said stored fill methods (see fig 11 element 1102 and paragraph 0039).

13. As to claims 14, Baras et al. teaches wherein the step of selecting said fill method includes the steps of storing manufacturing design rules, and selecting said fill method responsive to said stored manufacturing design rules (see fig 9-11 element 1102 and paragraph 0034-0040).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh C. Tat whose telephone number is 571 272-1908. The examiner can normally be reached on 7:30 - 4:00 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew Smith can be reached on 571 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh Tat
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March 20 2004

A handwritten signature in black ink, appearing to read "Paul Dinh", with a long, sweeping horizontal stroke extending to the right.